

ADDENDUM NO. 2  
TO  
PLANS AND SPECIFICATIONS  
FOR  
EDITH KANAKA'OLE MULTI-PURPOSE STADIUM  
BUILDING ADDITION & IMPROVEMENTS  
JOB NO. PR-4166  
SOUTH HILO, HAWAII  
COUNTY AND STATE OF HAWAII

**NOTICE TO BIDDERS**

The items listed below are made a part of the current contract and shall govern the work, taking precedence over the previously issued specifications and drawings governing the particular item of work mentioned.

**DRAWINGS**

*Addendum No. 2 revisions marked on the plans with a delta 2 symbol, dated 11/26/12.*

ITEM NO. 1 - SHEET TS2 **REPLACE** in its entirety.

ITEM NO. 2 - SHEET A11.7.1 **REPLACE** in its entirety.

ITEM NO. 3 - SHEET E1.0 **REPLACE** in its entirety.

ITEM NO. 4 - SHEET E2.5 **REPLACE** in its entirety.

ITEM NO. 5 - SHEET E3.0 **REPLACE** in its entirety.

**REQUEST FOR INFORMATION/REQUEST FOR CLARIFICATION**

1. **QUESTION:** *What is the brand of the existing switchboard DP?*

**RESPONSE:** Cutler Hammer Type VB Switchgear, Serial Number 5LF775290A, 277/480V, 3ph, 4W, 800A.

2. **QUESTION:** *Should the glu-lams be V-8 type or V-4?*

**RESPONSE:** See Sheet S1.1 - WOOD - Note 9.



Warren H. W. Lee, P.E., Director  
Department of Public Works  
County of Hawaii

Date Issued: November 26, 2012


Please detach and execute the receipt below. Return immediately via facsimile (808) 961-8630 or mail to the Administration Office, Department of Public Works, County of Hawaii at Aupuni Center, 101 Pauahi Street, Suite 7, Hilo, HI 96720-4224.

Receipt of Addendum No. 2 via website for the EDITH KANAKA'OLE MULTI-PURPOSE STADIUM BUILDING ADDITION & IMPROVEMENTS, Job No. PR-4166, South Hilo, Hawaii, is hereby acknowledged.

Signed \_\_\_\_\_ Title \_\_\_\_\_

Firm \_\_\_\_\_ Date \_\_\_\_\_


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DWG NO	SHT NO	DESCRIPTION
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DWG NO	SHT NO	DESCRIPTION
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MARK	DATE	DESCRIPTION
	11/26/12	ADDENDUM #2

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 FAHARI STREET, SUITE 100 HILO, HAWAII 96720 PHONE: 808.961.8311 / FAX: 808.961.8411

EDITH KANAKA'OLE MULTI-PURPOSE STADIUM  
BUILDING ADDITION & IMPROVEMENTS

TMK: (3) 2-2-33: 001  
HILO, HAWAII

DESIGNED BY: SF  
DRAWN BY: SJKG  
CHECKED BY: SF

SHEET NO.  
**TS2**

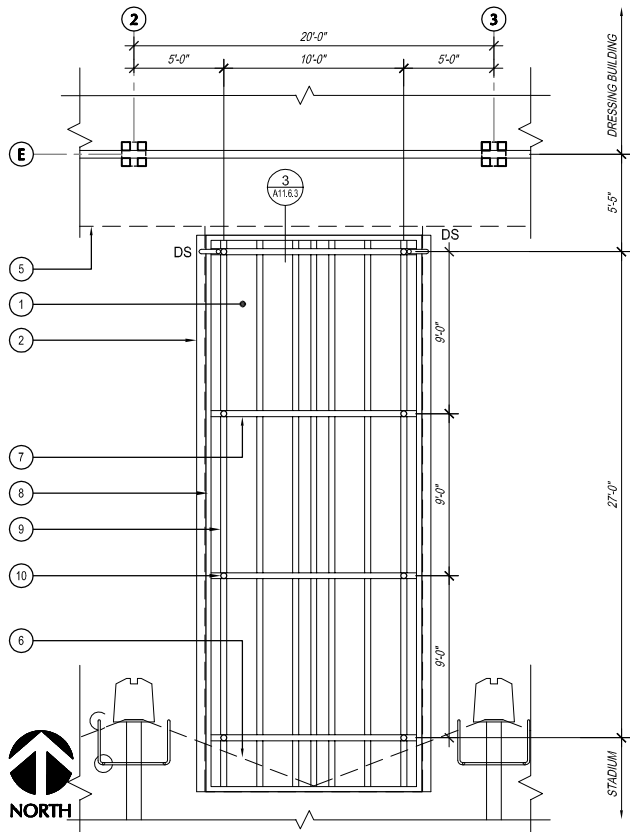
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DATE: OCTOBER 26, 2012

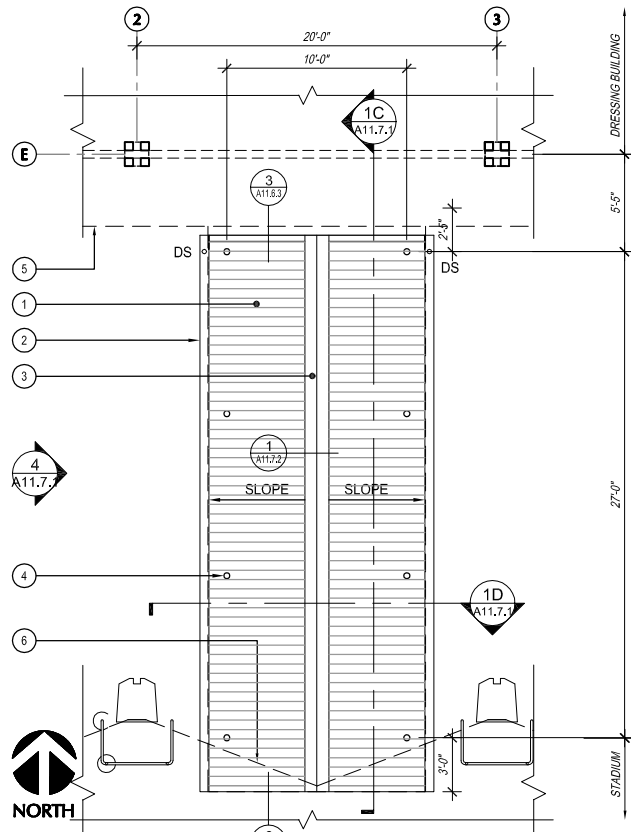
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DATE: \_\_\_\_\_

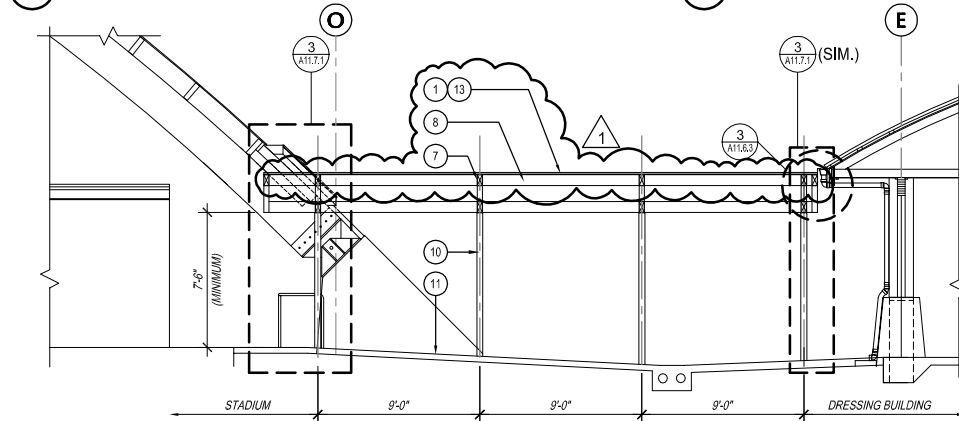
S:\FLA\PRODUCTION\Projects\12010.00 COH - Ho'olulu, Edith Kana'ole Multi-Purpose Stadium Bldg Addition & Improvements\3.00 Design\3.01 Basis Design\3.01.2 Design Development Phase



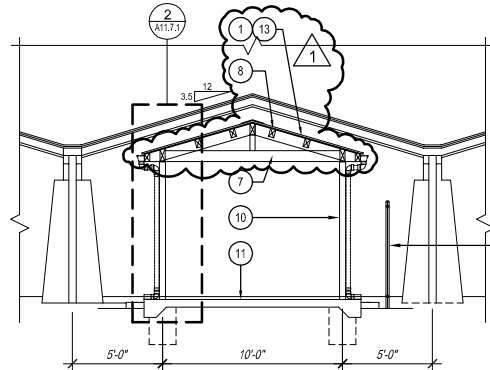
1A REFLECTED CEILING PLAN / CANOPY 'C' WALKWAY



1B ROOF PLAN / CANOPY 'C' WALKWAY



1C SECTION THRU CANOPY / CANOPY 'C' WALKWAY



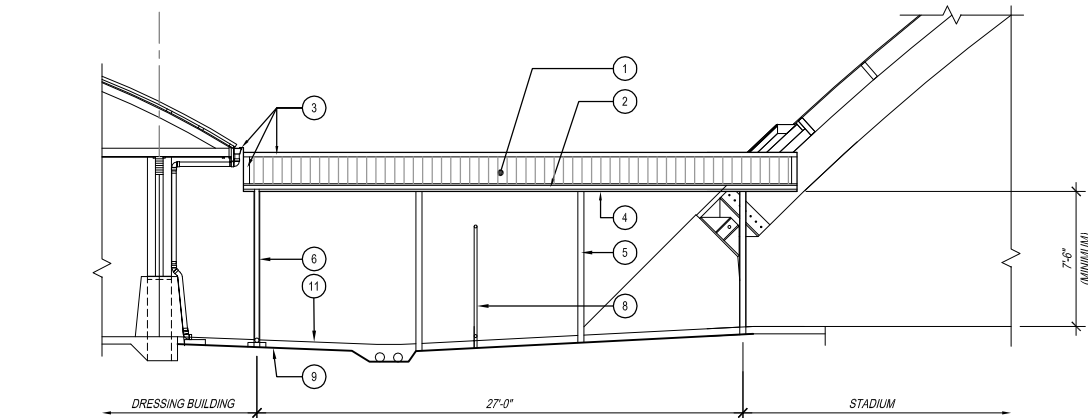
1D SECTION THRU CANOPY / CANOPY 'C' WALKWAY

1 CANOPY 'C' WALKWAY DETAIL / DRESSING BUILDING  
SCALE: 3/16"=1'

KEYNOTES:

- 1 PRE-FIN MTL ROOFING
- 2 PRE-FAB GUTTER
- 3 PRE-FIN FLASHING
- 4 COLUMN BELOW
- 5 DRESSING BLDG ROOF LINE
- 6 STADIUM ROOF LINE
- 7 4x FRAME, SSD
- 8 4x PURLINS, SSD
- 9 4x FASCIA, SSD
- 10 COLUMN, SSD
- 11 CONC SLAB, SSD
- 12 CHAIN LINK FENCE & GATE
- 13 PLY SHTG, SSD

0 2'-8" 5'-4"  
SCALE IN FEET

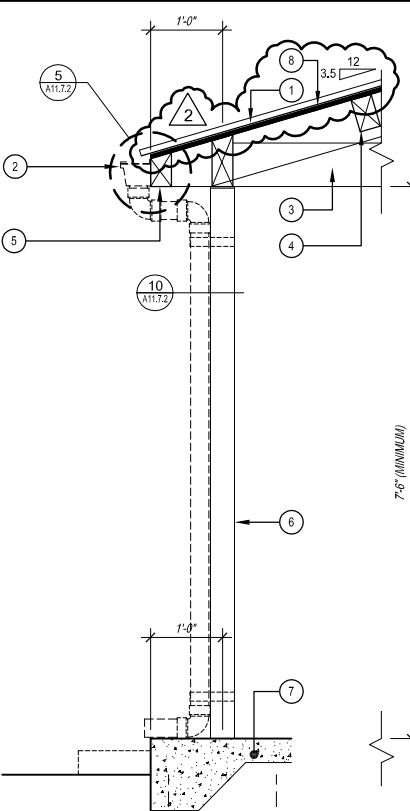


4 EXTERIOR ELEVATION / CANOPY 'C' WALKWAY DETAIL / DRESSING BUILDING  
SCALE: 3/16"=1'

KEYNOTES:

- 1 PRE-FIN MTL ROOFING
- 2 PRE-FAB GUTTER
- 3 PRE-FIN FLASHING
- 4 4x FASCIA, SSD
- 5 STL COLUMN, SSD
- 6 3" DIA PVC DOWNSPOUT
- 7 CONC SLAB, SSD
- 8 CHAIN-LINK FENCE & GATE, SCD
- 9 FIN GRADE, SCD

0 2'-8" 5'-4"  
SCALE IN FEET

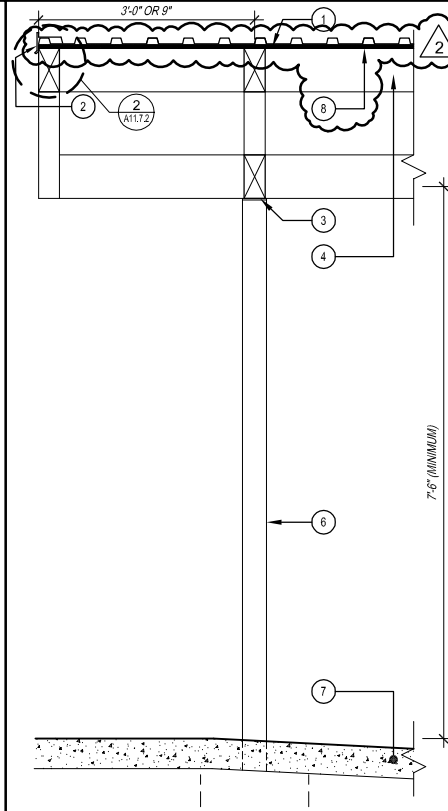


2 WALL SECTION  
SCALE: 3/4"=1'

KEYNOTES:

- 1 PRE-FIN MTL ROOFING
- 2 PRE-FAB GUTTER
- 3 4x FRAME, SSD
- 4 4x PURLINS, SSD
- 5 4x FASCIA, SSD
- 6 STL COLUMN, SSD
- 7 CONC SLAB, SSD
- 8 PLY SHTG, SSD

0 8" 16"  
SCALE IN FEET



3 WALL SECTION  
SCALE: 3/4"=1'

KEYNOTES:

- 1 PRE-FIN MTL ROOFING
- 2 PRE-FIN FLASHING
- 3 4x FRAME, SSD
- 4 4x PURLINS, SSD
- 5 4x FASCIA, SSD
- 6 STL COLUMN, SSD
- 7 CONC SLAB, SSD
- 8 PLY SHTG, SSD

0 8" 16"  
SCALE IN FEET

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 FAUHI STREET, SUITE 610, HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411



EDITH KANAKA'OLE MULTI-PURPOSE STADIUM  
BUILDING ADDITION & IMPROVEMENTS

JOB NO.: PR-4166  
HILLO, HAWAII  
TMK: (3) 2-2-33: 001

DESIGNED BY: SF  
DRAWN BY: SJK-G  
CHECKED BY: SF

SHEET NO.  
A11.7.1

DATE: OCTOBER 26, 2012  
SHEETS: 0F 00

MARK	DATE	DESCRIPTION
1	11/16/12	ADDENDUM #1
2	11/26/12	ADDENDUM #2
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FLEMING &  
Associates, LLC  
557 MANONO STREET  
HILO, HAWAII

THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

EXPIRES 04-30-2014

REVIEWED: DATE

DEPARTMENT OF PARKS AND RECREATION

S:\FLA\PRODUCTION\Projects\12010.00 COH - Ho'olulu, Edith Kanaka'ole Multi-Purpose Stadium Bldg Addition & Improvements\3.00 Design\3.01 Basis Design\3.01.2 Design Development Phase

## ELECTRICAL GENERAL NOTES

- DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK.
- FINAL CONNECTIONS & ROUGH-IN REQUIREMENTS TO EQUIPMENT SHALL BE PER MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED.
- ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A #12 PULLWIRE OR EQUAL AND SHALL BE IDENTIFIED AT ALL JUNCTION, PULL AND TERMINATION POINTS, USING PERMANENT METALLIC TAGS. TAG SHALL INDICATE INTENDED USE OF CONDUIT, ORIGINATION AND TERMINATION POINTS OF EACH INDIVIDUAL CONDUIT. STUB CONDUIT OUT 6" INTO AN ACCESSIBLE AREA. CAP OPEN ENDS NOT TERMINATED IN A JUNCTION BOX.
- FIXTURES INDICATED AS BEING ON EMERGENCY OR NIGHT LIGHT CIRCUITS SHALL BE PROVIDED WITH SELF-CONTAINED BATTERY POWERED INVERTER UNIT FOR DIRECT MOUNTING IN FIXTURE. PROVIDE UNIT WITH FULLY AUTOMATIC TWO RATE CHARGER, NICKEL CADMIUM BATTERY, AC "ON" PILOT LIGHT, AND TEST SWITCH. DESIGN AND WIRE UNIT TO AUTOMATICALLY TRANSFER TO BATTERY SUPPLY ON LOSS OF NORMAL AC POWER AND TO OPERATE FOR MINIMUM 1-1/2 HOURS.
- IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY.
- CONTRACTOR SHALL REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL AND OTHER DRAWINGS PRIOR TO BID.
- CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND VERIFY THAT CONDITIONS ARE AS INDICATED. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN HIS BID ALL COSTS REQUIRED TO MAKE HIS WORK MEET EXISTING CONDITIONS.
- PROPOSED SUBSTITUTIONS OF ELECTRICAL EQUIPMENT OR REQUEST FOR "OR EQUAL" OR "APPROVED EQUAL" LISTING SHALL BE SUBMITTED TO ARCHITECT NOT LESS THAN TEN (10) WORKING DAYS PRIOR TO BID.
- WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT.
- WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES AND ORDINANCES.
- PROVIDE PERMITS AND INSPECTIONS REQUIRED.
- GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY REMEDIED WITHOUT COST TO THE OWNER.
- PROVIDE RECORD DRAWINGS TO ARCHITECT. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, REROUTINGS, ETC.
- VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN.
- SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.
- SYSTEM OUTAGES SHALL BE PERMITTED ONLY AT TIMES APPROVED BY OWNER, IN WRITING. WORK WHICH COULD RESULT IN AN ACCIDENTAL OUTAGE (BEYOND BRANCH CIRCUITS) SHALL BE PERFORMED WITH THE OWNER'S MAINTENANCE PERSONNEL ADVISED OF SUCH WORK. SERVICE SHALL BE MAINTAINED TO EXISTING AREAS DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE PORTABLE GENERATORS, TEMPORARY POWER, CABLES, OUTLETS, ETC., AS REQUIRED TO MAINTAIN CONTINUITY OF SERVICE. PLACEMENT OF SUCH PORTABLE EQUIPMENT SHALL BE SUBJECT TO OWNER APPROVAL.
- WIRE SHALL BE COPPER, 75°C RATED FOR GENERAL USE. FOR HID FIXTURES AND WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS WIRE SHALL BE COPPER, MINIMUM 90°C RATED. SIZES INDICATED ARE FOR INSTALLATION IN A MAXIMUM 30°C AMBIENT. CONDUCTOR AMPACITY SHALL BE DERATED FOR HIGHER AMBIENT INSTALLATIONS.
- SPLICES IN EXTERIOR PULLBOXES AND MANHOLES SHALL BE MADE WATERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
- PRESENT SHOP DRAWING SUBMITTAL DATA AT ONE TIME, BOUND IN THREE-RING BINDERS, INDEXED IN A NEAT AND ORDERLY MANNER. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO: LIGHTING FIXTURES, TRANSFORMERS, SWITCHGEAR, PANELBOARDS, WIRING DEVICES, SAFETY SWITCHES, LAMPS, CONDUIT, AND CONDUIT FITTINGS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.
- CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.
- SYSTEMS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION. LIGHTS, SWITCHES, RECEPTACLES, MOTORS, ETC., SHALL BE CONNECTED AND OPERABLE.
- WIRING DEVICES SHALL BE SPECIFICATION GRADE AND RATED AT 20 AMPERES. THE DEVICE PLATES SHALL BE LEXAN OR NYLON (IN KITCHENS WITH STAINLESS STEEL COUNTERS DEVICE PLATES SHALL BE STAINLESS STEEL). THE COLOR OF THE DEVICES AND COVER PLATES SHALL BE AS DIRECTED BY ARCHITECT.
- PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH GROUND FAULT CIRCUIT.
- VERIFY EXACT LOCATIONS OF EXISTING AND NEW UNDERGROUND UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SERVICE FEEDERS (CONDUIT AND/OR WIRE), PULLBOXES, TRANSFORMER PADS, SAWCUTTING AND PATCHING, CONCRETE/PAVING, ETC., REQUIRED. BACKFILL TRENCHES TO 90% COMPACTION AND PATCH TO MATCH EXISTING. CONTRACTOR SHALL OBTAIN AND VERIFY EXACT UTILITY COMPANY DRAWINGS AND REQUIREMENTS.
- BOXES SHALL BE MINIMUM 4" SQUARE WITH REQUIRED EXTENSIONS & PLASTER OR TILE RINGS.
- SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, DISCONNECT SWITCHES, ETC. SHALL BE MANUFACTURED BY GENERAL ELECTRIC, SIEMENS, SQUARE 'D' OR CUTLER-HAMMER. BOLT FREE STANDING EQUIPMENT TO 4" HIGH CONCRETE HOUSEKEEPING PADS.
- PROVIDE ENGRAVED NAMEPLATES ON SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC., INDICATING EQUIPMENT DESIGNATION (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE.
- PANEL DIRECTORIES SHALL BE REMOVABLE. SUBMIT PROPOSED SCHEDULE OF DIRECTORIES TO OWNER FOR APPROVAL. ROOM NAMES AND NUMBERS SHALL BE AS DIRECTED BY OWNER. DIRECTORIES SHALL BE TYPED AND INSTALLED UNDER CLEAR PLASTIC COVERS.
- DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE. INSTALL DISCONNECT SWITCH ON TWO 24" LONG UNISTRUT CHANNELS DRILLED AND BOLTED TO HVAC UNIT FRAME WHERE POSSIBLE (COORDINATE LOCATION W/ HVAC MANUFACTURER TO AVOID WARRANTY INFRACTIONS). SILICONE SEAL ALL HOLES IN UNIT.
- CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE AND FUSES SHALL BE BUSSMANN.
- PROVIDE 4" HIGH CONCRETE EQUIPMENT PADS BENEATH SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC.
- IMMEDIATELY AFTER AWARD OF CONTRACT, CONTRACTOR SHALL VERIFY AVAILABLE PHYSICAL SPACE AND AMPACITY OF EXISTING PANELBOARDS, SWITCHBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC., AND PROVIDE WRITTEN DOCUMENTATION OF FINDINGS TO THE ENGINEER. DOCUMENTATION SHALL INCLUDE A MINIMUM 24 HOUR RECORDING AMPERE READING ON ALL EXISTING SWITCHGEAR BEING UTILIZED FOR THIS PROJECT.
- ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC RACEWAYS. RACEWAYS IN SLAB-ON-GRADE OR BELOW GRADE SHALL BE SCHEDULE 40 PVC. TRANSITIONS FROM BELOW TO ABOVE GRADE SHALL BE WITH RIGID STEEL ELBOWS WITH P.V.C. JACKET OR APPROVED EQUAL PROTECTION. EMT FITTINGS SHALL BE STEEL. CONNECTORS SHALL BE INSULATED THROAT TYPE. TYPE MC CABLE MAY BE USED FOR BRANCH CIRCUITS #8 AWG AND SMALLER.
- NON-METALLIC AND FLEXIBLE METAL CONDUITS SHALL HAVE A CODE SIZED COPPER GROUNDING CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
- FINAL CONNECTIONS TO MOTORS, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE WITH SEAL-TITE FLEX (3'-0" MAXIMUM LENGTH) AND APPROVED FITTINGS. DO NOT SECURE CONDUITS, DISCONNECTS OR DEVICES TO DUCTWORK OR MECHANICAL EQUIPMENT.
- ALL ELECTRICAL SYSTEMS COMPONENTS SHALL BE LISTED OR LABELED BY U.L. OR OTHER RECOGNIZED TESTING FACILITY.
- WIRE TERMINATION PROVISIONS FOR PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, AND ALL OTHER ELECTRICAL APPARATUS SHALL BE LISTED AS SUITABLE FOR 75°C.
- RECEPTACLES INSTALLED OUTSIDE, ON THE BUILDING EXTERIOR OR ROOF, IN KITCHENS OR WITHIN 6 FEET HORIZONTALLY FROM A SINK OR DRINKING FOUNTAIN UNLESS LOCATED BELOW A COUNTER OR OTHERWISE PROTECTED SHALL BE GFCI TYPE OR PROTECTED BY GFI CIRCUIT BREAKER.
- WHEN COMPLETE THE ELECTRICAL CONTRACTOR SHALL MEASURE THE STEADY STATE LOAD CURRENTS AT EACH PANEL BOARD FEEDER. SHOULD THE DIFFERENCE AT ANY PANEL BOARD BETWEEN PHASES EXCEED 20%, THE ELECTRICAL CONTRACTOR SHALL REARRANGE CURRENTS IN THE PANEL TO BALANCE PHASE LOADS.
- ALL EQUIPMENT SUCH AS SWITCHBOARDS, DISTRIBUTION BOARDS, DISCONNECT SWITCHES, AND PANELBOARDS SHALL BE BY THE SAME MANUFACTURER. ALL FUSES PROVIDED SHALL BE OF THE SAME MANUFACTURER.
- COORDINATE THE LOCATION OF LIGHTING FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. UNLESS OTHERWISE VERIFIED IN WRITING THE REFLECTED CEILING PLAN LOCATIONS SHALL GOVERN.
- COORDINATE THE LOCATION OF ALL WALL MOUNTED EQUIPMENT WITH THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS. UNLESS OTHERWISE VERIFIED IN WRITING THE ARCHITECTURAL DRAWINGS SHALL GOVERN.
- ALL WORK SPECIFIED HEREIN SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND ARCHITECTURAL BARRIERS ACT ACCESSIBILITY GUIDELINES - 2004.

## FIXTURE SCHEDULE

FIXT. TYPE	MANUFACTURER		VOLT AMPS	MOUNTING	LAMP TYPE	REMARKS	VOLT
	NAME	CATALOG NUMBER					
A	LITHONIA	STL48LMVOLT50WLP835NX (EL14L)	50	SURFACE	LED	SURFACE MOUNTED VOLUMETRIC FLUORESCENT (EL OPTION FOR FIXTURES INDICATED AS EMERGENCY)	277/ 120
B	LITHONIA	FEM4LED5L35MAFLMVOLT	50	SURFACE, UNLESS OTHERWISE NOTED	LED	4' FULLY ENCLOSED LED	277/ 120
C	COOPER	A04SIA2LED35KUNVWRC3	50	WALL ABOVE MIRROR	LED	4' WALL MOUNTED ETCHED DIFFUSER VANITY LIGHT	277/ 120
D	COOPER	E1W-WL-2-L35-1C-UNV-SU-WA	50	WALL @ +96"	LED	4' WALL MOUNTED INDIRECT/DIRECT LED	277/ 120
E	LITHONIA	FEM4LED5L35MAFLMVOLT	50	SURFACE, UNLESS OTHERWISE NOTED	LED	8' FULLY ENCLOSED LED	277/ 120
F	LITHONIA	OLVTWM	35	WALL @ +96"	LED	WALL MOUNTED VAPOR TIGHT LED	277/ 120
G	LITHONIA	L7XLEDT24GSKT	10	RECESSED	LED	6" LED DOWNLIGHT (EL OPTION FOR FIXTURES INDICATED AS EMERGENCY)	277/ 120
H	LITHONIA	ZL2L482300LMVOLTLP835	35	SURFACE	LED	4' FLUORESCENT STRIP FIXTURE WITH WIRE GUARD	277/ 120
-	-	-	-	-	-	-	-

## ELECTRICAL SYMBOLS

+18"	INDICATES MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE ABOVE FINISH FLOOR OR FINISH GRADE		MAIN SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD
AFF	INDICATES ABOVE FINISHED FLOOR		CONCRETE PULLBOX WITH HEAVY DUTY STEEL TRAFFIC COVER
C	INDICATES CONDUIT WITH PULL-LINE ONLY		TRANSFORMER
GFCI	INDICATES GROUND FAULT CIRCUIT INTERRUPTER CIRCUITS PROTECTED WITH GFCI SHALL BE PROVIDED WITH DEDICATED NEUTRALS		HOMERUN CONDUIT - STROKES INDICATE QUANTITY OF CONDUCTORS
GFP	INDICATES GROUND FAULT PROTECTION		CONDUIT AND/OR WIRE CONCEALED IN WALL OR ABOVE CEILING EXCEPT IN EXPOSED STRUCTURE AREAS
GRND	INDICATES GROUND		CONDUIT AND/OR WIRE BELOW FLOOR OR GRADE
HELCO	INDICATES LOCAL UTILITY		CIRCUITING - STROKE WITH DOT INDICATES ISOLATED GROUND CONDUCTOR
PNL	INDICATES PANEL		1/2"-2 #12 & 1 #12 GRND THWN UNLESS NOTED
WP	INDICATES WEATHER-PROOF (NEMA 3R)		1/2"-3 #12 & 1 #12 GRND THWN UNLESS NOTED
	LETTER INDICATES LIGHT FIXTURE TYPE AS INDICATED ON FIXTURE SCHEDULE		1/2"-4 #12 & 1 #12 GRND THWN UNLESS NOTED
	FLUORESCENT FIXTURE		CIRCUIT BREAKER
	FLUORESCENT FIXTURE		GROUNDING ELECTRODE
	DOWNLIGHT FIXTURE		SINGLE METER WITH CT
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT OR INTEGRAL BATTERY BACK-UP		DIVISION 23 EQUIPMENT - SEE HVAC AND PLUMBING DRAWINGS
	WALL MOUNTED FIXTURE		GROUND BUS & GROUND ELECTRODES
	EXIT LIGHT WITH DIRECTIONAL ARROWS AS INDICATED CEILING MOUNTED		JUNCTION BOX
S	SINGLE POLE SWITCH @ +48" UNLESS NOTED		NON-FUSED DISCONNECT SWITCH - 30A, 3P, UNLESS NOTED OTHERWISE
S <sub>3</sub>	3-WAY POLE SWITCH @ +48" UNLESS NOTED		COMPANY SWITCH
S <sub>T</sub>	THERMAL OVERLOAD SWITCH		TIMECLOCK
	DUPLEX RECEPTACLE @ +18" UNLESS NOTED		PHOTOCELL (INSTALL ON ROOF FACING NORTH)
	GFCI RECEPTACLE @ +18" UNLESS NOTED		SURFACE MOUNTED PANELBOARD
	DOUBLE DUPLEX RECEPTACLE @ +18" UNLESS NOTED		FLUSH MOUNTED PANELBOARD
	RECEPTACLE INSTALLED ABOVE COUNTER		

HAWAII COUNTY CODE- CHAPTER 5 - BUILDING  
2006 IECC & ORDINANCES 09-48 & 10-68  
BUILDING ENERGY EFFICIENCY STANDARDS  
I CERTIFY THAT THE DESIGN IS IN CONFORMANCE WITH THE BUILDING ENERGY EFFICIENCY  
STANDARDS PERTAINING TO SECTION 506 ELECTRICAL POWER AND LIGHTING SYSTEMS  
SECTION 506 ELECTRICAL POWER AND LIGHTING SYSTEMS

Signature Date 10/26/2012  
CHRISTOPHER J. LOVETT  
Name (Print)  
ELECTRICAL ENGINEER  
Title  
14689-E  
PE or Arch. License No.

**FLEMING &  
Associates, LLC**  
557 MANONO STREET  
HILO, HAWAII



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION.

SIGNATURE

DATE

DEPARTMENT OF PARKS AND RECREATION

REVIEWED: TMK: (3) 2-2-33: 001

HILO, HAWAII

JOB NO.: PR-4166

PLAN SHEET DESCRIPTION: ELECTRICAL COVER SHEET

DATE: SEPTEMBER 14, 2012

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PALAHU STREET, SUITE 610 HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411




**EDITH KANAKA'OLE MULTI-PURPOSE STADIUM  
BUILDING ADDITION & IMPROVEMENTS**

**E1.0**

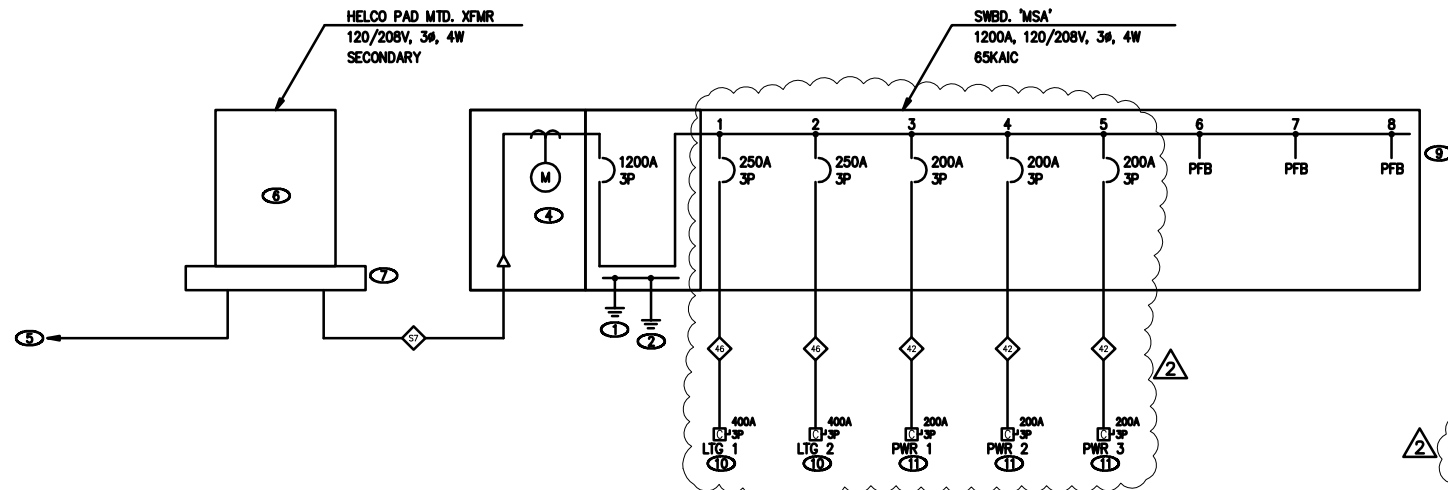
SHEET NO.

OF SHEETS

DESIGNED BY: CL		 <p>COUNTY OF HAWAII DEPARTMENT OF PARKS &amp; RECREATION 101 PAUHAH STREET, SUITE 6 / HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411</p>	<h1 style="text-align: center;">EDITH KANAKA'OLE MULTI-PURPOSE STADIUM</h1> <h2 style="text-align: center;">BUILDING ADDITION &amp; IMPROVEMENTS</h2>	JOB NO.: PR-4186      HILO, HAWAII  PLAN SHEET DESCRIPTION: ELECTRICAL PLAN - TV VAN AREA	TMK: (3) 2-2-33: 001
DRAWN BY: WO					
CHECKED BY: CL					
SHEET NO.	E2.5				
_____ OF _____ SHEETS					
DATE:		SEPTEMBER 14, 2012			

A. ELECTRIC

1. SERVICE VOLTAGE: 120/208V, 3PH, 4W
2. TYPE OF SERVICE: BELOW GROUND
3. ESTIMATED CONNECTED KVA: 317.0  
ESTIMATED DEMAND KVA: 221.9
4. ESTIMATED AVERAGE MEASURED TOTAL DEMAND KVA: 221.9
5. DESIGN SERVICE CAPACITY 1200 AMPERES  
SERVICE CONDUCTORS: (2) SETS OF #250KCMIL AWG COPPER
6. METERING: RATE SCH J, HELCO STD. B-5  
(13 JAW, 200A METER SOCKET)
7. BILLING ADDRESS: COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PAUHAU STREET, SUITE 6  
HILLO, HAWAII 96720



**A** SINGLE LINE DIAGRAM - NEW (ADD. ALT. #3)  
- NO SCALE

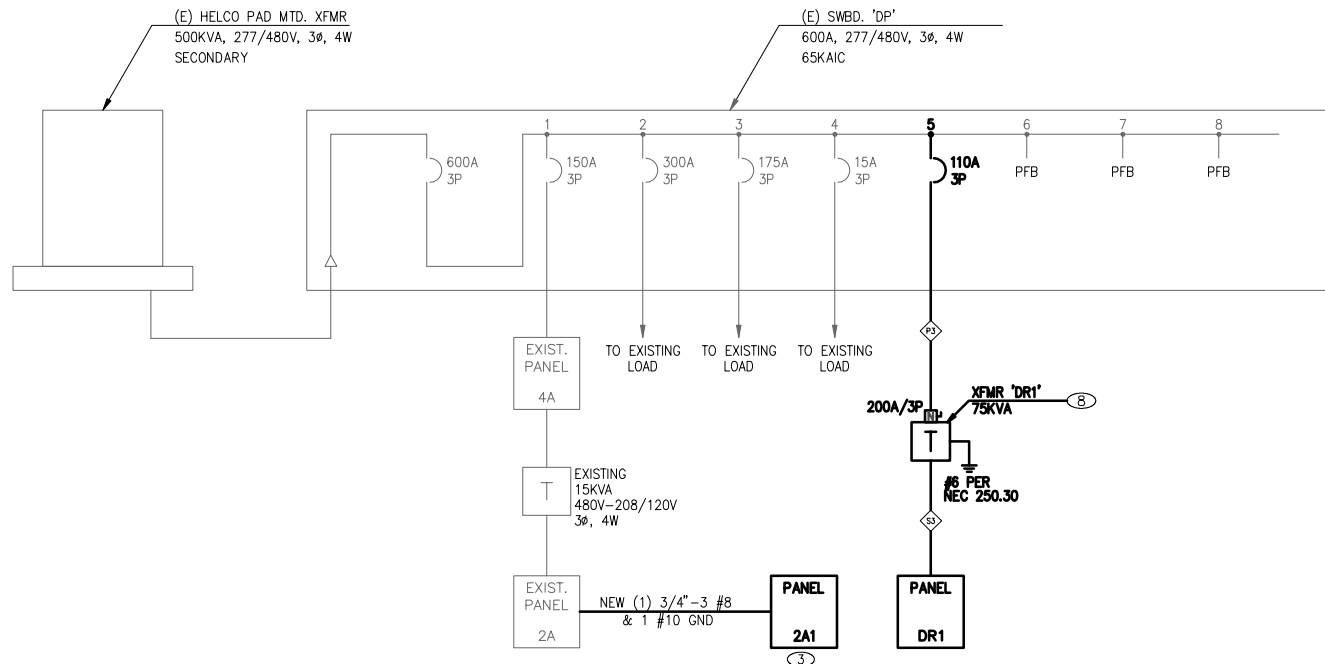
- ① PROVIDE 20 LF OF #3/0 CU PER NEC 250.52(A)(3).
- ② PROVIDE #3/0 CU PER NEC 250.52(A)(5).
- ③ THIS WORK PART OF ADD. ALTERNATE #2.
- ④ METERING PROVISIONS PER HELCO REQUIREMENTS.
- ⑤ PROVIDE RACEWAYS, TRENCHING, BACKFILLING, BOXES, ETC. PER HELCO REQUIREMENTS.
- ⑥ NEW PAD MOUNTED TRANSFORMER BY HELCO. PROVIDE NEW 208V, 3ø, 4W SERVICE AS INDICATED. PROVIDE CONCRETE PAD PER HELCO REQUIREMENTS.
- ⑦ PROVIDE 4" HIGH CONCRETE PAD AROUND EQUIPMENT. REFER TO DETAIL 1 SHEET E4.0.
- ⑧ DRY-TYPE TRANSFORMER, 480V, 3ø, E3, DELTA TO 208/120V, 3ø, 4W WYE, 115°C RISE, 220°C CLASS INSULATION AND KVA SIZE AS SHOWN.
- ⑨ PROVIDE 4" HIGH CONCRETE PAD AROUND EQUIPMENT.
- ⑩ PROVIDE STAGECRAFT #600-400-C OR EQUIVALENT 400A COMPANY SWITCH WITH (5) CAM-LOCK RECEPTACLES.
- ⑪ PROVIDE STAGECRAFT #600-200-C OR EQUIVALENT 200A COMPANY SWITCH WITH (5) CAM-LOCK RECEPTACLES.

FEEDER SCHEDULE		
FDR. NO.	DESCRIPTION	CONDUIT AND WIRE SIZE (75° C CU 600V) (105° C 15 & 5KV)
62	75KVA XFMR 480V PRIMARY FEEDER (110A MOCPS)	1 1/2" - 3 #1 & 1 #6 GRND
63	75KVA XFMR 208V SECONDARY FEEDER (225A MOCPS)	2 1/2"-4 #4/0 & 1 #2 GRND
67	75KVA XFMR 208V SECONDARY FEEDER CONCRETE ENCASED (1200A MOCPS)	(3) 4" EA W/ 4 #400KCM & 1 #3/0 GRND
42	200A, DISTRIBUTION FEEDER	2"-4 #3/0 & 1 #6 GRND
46	250A, DISTRIBUTION FEEDER	3"-4 #250KCMIL & 1 #4 GRND

NOTES:  
 1. SOME FEEDERS MAY NOT BE USED ON THIS PROJECT.  
 2. VOLTAGE DROP MAY REQUIRE THE USE OF A LARGER AMPACITY FEEDER.

SWBD, 'DP'	=	
EXISTING LOAD	=	220 KVA
+ 25% PER NEC 220.87	=	55 KVA
PNL 'DR1'	=	28.9 KVA
PNL '2A1' (ADD ALT #2)	=	8.6 KVA
TOTAL	=	312.5 KVA
/480V, 3ø	=	376 A

<u>SWBD, 'MSA'</u>			
COMPANY SWITCH	'LTG 1'	=	72.0 KVA
COMPANY SWITCH	'LTG 2'	=	72.0 KVA
COMPANY SWITCH	'PWR 1'	=	57.6 KVA
COMPANY SWITCH	'PWR 2'	=	57.6 KVA
COMPANY SWITCH	'PWR 3'	=	57.6 KVA
TOTAL		=	316.8 KVA
/208V, 3ø		=	879 A



**SINGLE LINE DIAGRAM - EXISTING/BASE BID/ADD. ALT. #2**  
**NO SCALE**



THIS WORK WAS PREPARED BY  
ME OR UNDER MY SUPERVISION

**SIGNATURE**

MARK	DATE	DESCRIPTION
1	11/16/12	ADDENDUM #1
2	11/26/12	ADDENDUM #2
REVIEWED:		
DEPARTMENT OF PARKS AND RECREATION		DATE

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
101 PALUJI STREET, SUITE 6 / HILO, HAWAII 96720 / PHONE: 808.961.8311 / FAX: 808.961.8411



## EDITH KANAKA'OLE MULTI-PURPOSE STADIUM BUILDING ADDITION & IMPROVEMENTS

TMK: (3) 2-2-33: 001

HILLO, HAWAII

JOB NO.: PR-4166

AN SHEET  
SCRIPTION: ELECTRICAL SINGLE LINE DIAGRAMS, SCHEDULES

DESIGNED BY:	CL
DRAWN BY:	WO
CHECKED BY:	CL

SHEET NO. E3.0

\_\_\_\_\_ OF \_\_\_\_\_ SHEETS

DATE: SEPTEMBER 14, 2012